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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,635

10/19/2005

Edmund Urbano

11885-00069-US

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EXAMINER

FRANK, NOAH S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,635	Applicant(s) URBANO ET AL.	
	Examiner NOAH FRANK	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
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| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/19/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 9-10 provide for the use of alkyd resin emulsions, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 9-10 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urbano et al. (US 6,469,096).

Considering Claim 1: Urbano et al. teaches alkyd resin emulsions (2:30-35) comprising a water-insoluble alkyd resin A and a polyester B used as an emulsifying

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resin (2:35-45). The polyester B is the esterification (2:45-50) product of a polyhydroxy component Ba, a C1-C4 (4:15-20) alkoxyethylene glycol Bb, a cycloaliphatic dicarboxylic acid or anhydride (4:25-35) Bc, and a fatty acid Bd (2:15-25). Because of the presence of the unsaturated fatty acid Bd (4:40-45) and the polyhydroxy component Ba, the polyester B is an alkyd resin. It also is water-soluble (2:55-60).

Urbano does not teach the claimed alkoxyethylene glycol to cycloaliphatic dicarboxylic acid anhydride ratio or the claimed miscibility ratio of the alkyd resins.

With regard to the claimed miscibility ratio, because Urbano teaches the formation of the alkyd resin (Ba) in situ, there is no mention of miscibility ratio of the alkyd resins corresponding to A and Ba. However, at the time of the invention a person of ordinary skill in the art would have found it obvious to have used alkyd resins that are homogeneously miscible at the claimed mass ratios, in order to make a stable alkyd resin.

With regard to the claimed glycol to anhydride ratio, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. The pH, and thus amount of neutralization necessary, may be controlled by the glycol to anhydride ratio. Consequently, it would be obvious to optimize. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215

Considering Claim 2: Urbano et al. teaches a mass ratio of 70 to 95% component A and 5 to 30% component B (4:65-5:5).

Considering Claim 3: Urbano et al. teaches from 15 to 35% of the polyhydroxy component (Ba), from 20 to 35% of the fatty acid (Bd), from 40 to 60% of the alkoxy polyethylene glycol (Bb), and from 15 to 25% of the cycloaliphatic dicarboxylic acid (Bc) (2:15-25). This results in 35 to 70% alkyd resin (Ba + Bd), and from 55 to 95% adduct (Bb + Bc).

Considering Claim 4: Urbano et al. teaches the alkyd resin A having an oil content 45 to 75% and an acid number less than 10 mg/g (2:35-40).

Considering Claim 5: Urbano et al. teaches the alkyd resin B having an acid number of 2.5 mg/g (6:20-25).

Considering Claim 6: Urbano et al. teaches reacting the components at a temperature of from 160 to 250°C under esterification conditions with known catalysts (2:45-50), diluting the resultant emulsifier resin with water to a mass fraction of 30 to 60%, the viscosity being preferably between 5000 and 50,000 mPa·s (5 to 50 Pa·s) (2:55-60), mixing the water insoluble alkyd resin A with the aqueous solution of the emulsifier resin at a temperature below 100°C (2:60-65), and diluting the mixture with water to a solids mass fraction of from 60 to 80% and a dynamic viscosity from 500 to 3000 mPa·s (2:60-65). The alkoxy polyethylene glycols have molar masses of from 500 to 2000 (4:20-25). Urbano teaches from 15 to 35% of the polyhydroxy component (Ba), from 20 to 35% of the fatty acid (Bd), from 40 to 60% of the alkoxy polyethylene glycol (Bb), and from 15 to 25% of the cycloaliphatic dicarboxylic acid (Bc) (2:15-25). This

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results in 35 to 70% alkyd resin (Ba + Bd), and from 55 to 95% adduct (Bb + Bc).

Urbano also teaches the viscosity being measured according to DIN ISO 3219 at 23°C (5:30-35).

While there is no mention of shear gradient, because both the prior art and the applicant's disclosure mention the same testing procedure (DIN ISO 3219), it has been assumed that the shear gradient would be identical.

With regard to the claimed glycol to anhydride ratios (molar and weight), the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. The pH, and thus amount of neutralization necessary, may be controlled by the glycol to anhydride ratio. Consequently, it would be obvious to optimize. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215

Urbano does not teach the reaction in a stepwise manner. However, selection of any order of mixing ingredients is *prima facie* obvious. MEPE 2144.04 At the time of the invention a person of ordinary skill in the art would have found it obvious to have prepared the alkyd emulsions in a stepwise manner, in order to tailor the emulsifier to multiple alkyd resins.

Considering Claim 7: Urbano et al. teaches the alkyd resin B having an acid number of 2.5 mg/g (6:20-25).

Considering Claim 8: Urbano et al. teaches a mass ratio of 70 to 95% component A and 5 to 30% component B (4:65-5:5).

Considering Claims 9-10: Urbano et al. teaches the resin emulsions as binders for paints, to formulate clearcoats, glazes, primers, and topcoats, and for coating compositions of textiles or mineral materials (5:15-20).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached form PTO-892.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noah Frank whose telephone number is 571-270-3667. The examiner can normally be reached on M-F 7-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796
19-Feb-08

NF
2-11-08